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Bruhat Bengaluru Mahanagara Palike

DETAILED PROJECT REPORT

CONSULTING SERVICES FOR PREPARATION OF DETAILED PROJECT REPORT FOR

Name of Work: Providing Street Lights in Yelahanka Division

COST OF THE PROJECT: 300.00 LAKHS

Submitted To:
The Executive Engineer,
Yelahanka Electrical Division,
B.B.M.P, Bangalore.

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Chapter -1
INTRODUCTION

Chapter -1

INTRODUCTION

1.1.1 General

Bengaluru is the capital of India's southern Karnataka state. The center of India's high-tech industry, the city is also known for its parks. It is also known as the Garden City because of its many beautiful gardens and parks. By Cubbon Park, Vidhana Soudha is a Neo-Dravidian legislative building. Former royal residences include 19th-century Bangalore Palace, modeled after England's Windsor Castle, and Tipu Sultan's Summer Palace, an 18th-century teak structure.During the last couple of decades, city has witnessed drastic increase in population, change in land use pattern of the city, life style of the people and their commuting habits and the revolutionary changes that has taken place in the automobile industry. This has contributed to the growth of vehicular traffic in an enormous way.

1.1.2 City Background

It also called the Silicon Valley of India , because of the high concentration of IT industry. Bangalore is rated to one of the fastest growing cities in Asia with a current population of more than 10 million. During the last couple of decades, city has witnessed drastic increase in population, change in land use pattern of the city, life style of the people and their commuting habits and the revolutionary changes that has taken place in the automobile industry.

1.1.3 Population

The Bangalore city population is currently more than 11 million and increasing in a forward march. The lifestyle of the citizens is changing day to day due to globalization and introducing of new brands in all sector. Bangalore, the fastest growing city of India, comprises of a dynamic blend of people, belonging to various religions, castes and communities. With the introduction of information technology in the city, it has assumed an international character. IT professionals not only from the various parts of India, but also that of the world, are migrating to the city. This has led to Bangalore becoming more like the melting pot of various cultures. Read on to know more about the people and lifestyle of Bengalooru, India.

1.1.4 Traffic growth

What adds to the traffic pressure in Bengaluru in particular is that there is very little scope for expansion of roads and the need to use existing roads for smooth movement of vehicles is

even more pronounced. It thus becomes mandatory for the administration to ensure better parking facilities. So far, the government and the BBMP have not taken this issue seriously and now the situation is such that it needs to be addressed seriously and effectively. Rapid population growth because of IT and other associated industries in Bengaluru led to an increase in the vehicular population to about 1.5 million, with an annual growth rate of 7-10%. With the increase in population and the expansion of the city, the problem of connectivity of the populace has arisen. Quite obviously personalized modes of transport have grown at a tremendous rate and two wheelers along with the cars almost comprise 90% of the total registered vehicular population in the city. Two wheelers constitute more than 70% of the total volume, while cars comprise 15%, autos 4% and the remaining 8% includes other vehicles such as buses, vans and tempos.

Project Location

The Project includes Providing Street Lights in Yelahanka Division. The Project area is in Yelahanka Assembly constituency, Bangalore.

Key Map of the roads proposed is enclosed in **Annexure A.1.1.**

M/s. SILICON CONSULTING ENGINEERS is entrusted by BBMP to carry out the work of Preparation of Detailed Estimate and Report for the above said work.

Accordingly we **M/s. SILICON CONSULTING ENGINEERS** have commenced the consultancy works as per the scope of services described in the RFP document.

1.2 Scope of Work

The Scope of Services of the Consultancy includes the following:

Inventory and condition surveys for alignment.

- Engineering surveys and investigations
- Rate analysis of scheduled items, BOQ and Cost estimates.
- Final Detailed Project Report and final drawings
- Photos of the project roads

1.2.1 Engineering surveys and investigations

The engineering surveys and investigations shall be divided into the following components:

- Topographic, alignment and land use survey
- Inventory survey
- Bridge condition survey

3 Project cost

The Consultant shall work out indicative BOQ of various components and prepare cost estimates of the Project Highway with a break up of cost for each component separately.

.4 Organisation of Detailed Project Report

The Methodology, as detailed in the Project proposal, it has been followed for carrying out the necessary Investigations and for the Preparation of Detailed Estimate and Report.

This Report includes the following.

- Chapter 2: Investigation & Surveys
- Chapter 3: Design Standard & Specification
- Chapter 4: Project Cost Estimates

Chapter -2
INVESTIGATION & SURVEYS

Chapter -2
ENGINEERING SURVEYS AND INVESTIGATIONS

1 General

Various surveys and investigations that are the essential inputs for detailed engineering design are detailed in this chapter. All the relevant maps / data / details available with the concerned departments have been collected, compiled and reviewed. Particular attention has been given to past / historical data / reports. A review of the past data available in the various studies has been listed out and such available data has been made use of, after updating / augmenting the data wherever necessary. The data as collected has been made use of in analysis, design, formulation of improvement proposals and costing. The activities have been performed on several fronts fully complying with the requirements. The activities that are carried out are brought out hereunder.

The various engineering surveys / investigations of the road sections include:

- Reconnaissance Survey.
- Visual Topographical Survey.
- Visual Condition Survey.

2.2 Reconnaissance Survey

Reconnaissance Survey of the road, considered for improvements, has been carried out to identify the general condition of roads, drains, culverts and bridges for further surveys / investigations, to understand kind of establishments along the stretches of roads and to work out land acquisition scheme. Making use of the observations / data collected during reconnaissance survey, detailed schedule for surveys / investigations required for the project has been finalized.

2.3 Visual Topographical Survey

Topographic Survey has been conducted all along the corridor by physically measuring the Road Width, Footpath Width, Drain Width, Alignment of Road and with the aid of Google Maps.

2.5.1 Visual Condition Survey

Visual Condition Survey of the road sections has been carried out by travelling along the patching, rutting, pot holes, edge breaking, etc. by visual observations in a well structured data format. The data so collected has been compiled and presented (kilometer wise) in the form of tables for easy understanding.

Chapter -3
DESIGN STANDARD & SPECIFICATION

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DESIGN STANDARD & SPECIFICATION

1 General

Planning and design of roads & CD structures, pedestrian facilities and street furniture are essentially based on the IRC standards and MoRT&H specifications. Whenever, the codes / standards are silent on some of the aspects, the same has been planned / designed based on sound engineering practices.

- Road Furniture and Appurtenances
- Bridges and CD Structures

Chapter -4
PROJECT COST ESTIMATES

1 Detailed Cost Estimate

Detailed cost Estimate has been worked out based on detailed engineering design

.2 General

Cost Estimate is an important part of the Report as it provides vital input to financial evaluation of the project. The cost estimates have been prepared for Strengthening of the existing road including strengthening of longitudinal drains, road furniture, site clearance and Dismantling.

.3 Basic rates

As part of Report, Rate Analysis of each of the item has been prepared by adopting PW, P & IWTD SR 2018 - 19, Bangalore Circle and KPWD Electrical SR 2019-20. The rates as given in PW, P & IWTD SR are to be enhanced by 6% for additional weightages for the works to be executed under extra ordinary conditions for Bangalore Metropolitan Limits. Items not covered in NHSR / PW, P & IWTD SR have been based on market rates.

4.4 Project Management and Quality Control

Provision of around 2.00% of Construction Cost has been made towards Cost of DPR Preparation, Quality Control, PMC and Proof Checking.

4.5 Project Cost

The total project cost for the proposed work is 300.00 Lakh.

Detailed Cost Estimate is enclosed in **Annexure A. 5.1**